

FIG. 1

GATCAAGCTTTTTTTTTTTTTTTTTTTTTTTTTTTGGATAACAACGATGAGGTTTATTTTGTCAAAACA
TCCAAGGGAAACATTAATTGTTGTTTGTCAACTGTGAACTTCACACTACATTGTCTAAGGATAGAAAAT
TGATGGGTATCACTCTGTCAGAAAATCCTCACCAAGAAGCCAATTCAAGGAATATGAAATTGACAAGCC
TTTCAAACAAAGATGTGTTTCGGACTTCACTGATGCGATGGTAGGTCTTTTGGGTACAAATAGATAGGGA
TGATATAAAACACAATCTTTTCCTGTCTATTCCATTTAGAAACTGGTGGGTGTGCTCACGTTTGTCTG
GGCATTGCAGCACTGCACACATACATGAATTAAGCAAAGCATCGGAAAGTATTGACACATGAGACTAAA
ATAAATAAGAG

FIG. 2A

```

      11      20      29      38      47      56
5'  ATT CGG CAC GAG GTG GAA GTC GCC GGT GCT GTT GTA GTT GGA GTC TGT TCA CGG
    ---
      65      74      83      92     101     110
GCC TGA GCT TCG AGG CCA GGC TCC TGG GTG TCG TTA ATG TTC GGG GCC GCC GGG
    ---
      119     128     137     146     155     164
CGC CAA CCG ATC GGA GCT CCA GCA GCC GGG AAC AGC TGG CAT TTC AGT AGA ACC
    ---
      173     182     191     200     209     218
ATG GAG GAG CTG GTT CAT GAC CTT GTC TCA GCA TTG GAA GAG AGC TCA GAG CAA
    ---
      M   E   E   L   V   H   D   L   V   S   A   L   E   E   S   S   E   Q

      227     236     245     254     263     272
GCT CGA GGT GGA TTT GCT GAA ACA GGA GAC CAT TCT CGA AGT ATA TCT TGC CCT
    ---
      A   R   G   G   F   A   E   T   G   D   H   S   R   S   I   S   C   P

      281     290     299     308     317     326
CTG AAA CGC CAG GCA AGG AAA AGG AGA GGG AGA AAA CGG AGG TCG TAT AAT GTG
    ---
      L   K   R   Q   A   R   K   R   R   G   R   K   R   R   S   Y   N   V

      335     344     353     362     371     380
CAT CAC CCG TGG GAG ACT GGT CAC TGC TTA AGT GAA GGC TCT GAT TCT AGT TTA
    ---
      H   H   P   W   E   T   G   H   C   L   S   E   G   S   D   S   S   L

      389     398     407     416     425     434
GAA GAA CCA AGC AAG GAC TAT AGA GAG AAT CAC AAT AAT AAT AAA AAA GAT CAC
    ---
      E   E   P   S   K   D   Y   R   E   N   H   N   N   N   K   K   D   H

      443     452     461     470     479     488
AGT GAC TCT GAT GAC CAA ATG TTA GTA GCA AAG CGC AGG CCG TCA TCA AAC TTA
    ---
      S   D   S   D   D   Q   M   L   V   A   K   R   R   P   S   S   N   L

      497     506     515     524     533     542
AAT AAT AAT GTT CGA GGG AAA AGA CCT CTA TGG CAT GAG TCT GAT TTT GCT GTG
    ---
      N   N   N   V   R   G   K   R   P   L   W   H   E   S   D   F   A   V

      551     560     569     578     587     596
GAC AAT GTT GGG AAT AGA ACT CTG CGC AGG AGG AGA AAG GTA AAA CGC ATG GCA
    ---
      D   N   V   G   N   R   T   L   R   R   R   R   K   V   K   R   M   A

      605     614     623     632     641     650
GTA GAT CTC CCA CAG GAC ATC TCT AAC AAA CGG ACA ATG ACC CAG CCA CCT GAG
    ---
      V   D   L   P   Q   D   I   S   N   K   R   T   M   T   Q   P   P   E

      659     668     677     686     695     704
GGT TGT AGA GAT CAG GAC ATG GAC AGT GAT AGA GCC TAC CAG TAT CAA GAA TTT
    ---
      G   C   R   D   Q   D   M   D   S   D   R   A   Y   Q   Y   Q   E   F

```

FIG. 2B

		713			722		731			740			749		758		
ACC	AAG	AAC	AAA	GTC	AAA	AAA	AGA	AAG	TTG	AAA	ATA	ATC	AGA	CAA	GGA	CCA	AAA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
T	K	N	K	V	K	K	R	K	L	K	I	I	R	Q	G	P	K
		767			776		785			794			803		812		
ATC	CAA	GAT	GAA	GGA	GTA	GTT	TTA	GAA	AGT	GAG	GAA	ACG	AAC	CAG	ACC	AAT	AAG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
I	Q	D	E	G	V	V	L	E	S	E	E	T	N	Q	T	N	K
		821			830		839			848			857		866		
GAC	AAA	ATG	GAA	TGT	GAA	GAG	CAA	AAA	GTC	TCA	GAT	GAG	CTC	ATG	AGT	GAA	AGT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
D	K	M	E	C	E	E	Q	K	V	S	D	E	L	M	S	E	S
		875			884		893			902			911		920		
GAT	TCC	AGC	AGT	CTC	AGC	AGC	ACT	GAT	GCT	GGA	TTG	TTT	ACC	AAT	GAT	GAG	GGA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
D	S	S	S	L	S	S	T	D	A	G	L	F	T	N	D	E	G
		929			938		947			956			965		974		
AGA	CAA	GGT	GAT	GAT	GAA	CAG	AGT	GAC	TGG	TTC	TAC	GAA	AAG	GAA	TCA	GGT	GGA
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
R	Q	G	D	D	E	Q	S	D	W	F	Y	E	K	E	S	G	G
		983			992		1001			1010			1019		1028		
GCA	TGT	GGT	ATC	ACT	GGA	GTT	GTG	CCC	TGG	TGG	GAA	AAG	GAA	GAT	CCT	ACT	GAG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
A	C	G	I	T	G	V	V	P	W	W	E	K	E	D	P	T	E
		1037			1046		1055			1064			1073		1082		
CTA	GAC	AAA	AAT	GTA	CCA	GAT	CCT	GTC	TTT	GAA	AGT	ATC	TTA	ACT	GGT	TCT	TTT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
L	D	K	N	V	P	D	P	V	F	E	S	I	L	T	G	S	F
		1091			1100		1109			1118			1127		1136		
CCC	CTT	ATG	TCA	CAC	CCA	AGC	AGA	AGA	GGT	TTC	CAA	GCT	AGA	CTC	AGT	CGC	CTT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
P	L	M	S	H	P	S	R	R	G	F	Q	A	R	L	S	R	L
		1145			1154		1163			1172			1181		1190		
CAT	GGA	ATG	TCT	TCA	AAG	AAT	ATT	AAA	AAA	TCT	GGA	GGG	ACT	CCA	ACT	TCA	ATG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H	G	M	S	S	K	N	I	K	K	S	G	G	T	P	T	S	M
		1199			1208		1217			1226			1235		1244		
GTA	CCC	ATT	CCT	GGC	CCA	GTG	GGT	AAC	AAG	AGA	ATG	GTT	CAT	TTT	TCC	CCG	GAT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
V	P	I	P	G	P	V	G	N	K	R	M	V	H	F	S	P	D
		1253			1262		1271			1280			1289		1298		
TCT	CAT	CAC	CAT	GAC	CAT	TGG	TTT	AGC	CCT	GGG	GCT	AGG	ACA	GAG	CAT	GAC	CAG
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S	H	H	H	D	H	W	F	S	P	G	A	R	T	E	H	D	Q
		1307			1316		1325			1334			1343		1352		
CAT	CAG	CTT	CTG	AGA	GAT	AAT	CGA	GCT	GAA	AGA	GGA	CAC	AAG	AAA	AAT	TGT	TCT
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
H	O	L	L	R	D	N	R	A	E	R	G	H	K	K	N	C	S

FIG. 2C

1361	1370	1379	1388	1397	1406
GTG AGA ACA GCC AGC AGG CAA ACA AGC ATG CAT TTA GGA TCC TTA TGC ACG GGA					
V R T A S R Q T S M H L G S L C T G					
1415	1424	1433	1442	1451	1460
GAT ATC AAA CGG AGA AGA AAA GCT GCA CCT TTG CCT GGA CCT ACT ACT GCA GGA					
D I K R R R K A A P L P G P T T A G					
1469	1478	1487	1496	1505	1514
TTT GTA GGT GAA AAT GCC CAG CCA ATC CTA GAA AAT AAT ATT GGA AAC CGA ATG					
F V G E N A Q P I L E N N I G N R M					
1523	1532	1541	1550	1559	1568
CTT CAG AAT ATG GGC TGG ACG CCT GGG TCA GGC CTT GGA CGA GAT GGC AAG GGG					
L Q N M G W T P G S G L G R D G K G					
1577	1586	1595	1604	1613	1622
ATC TCT GAG CCA ATT CAA GCC ATG CAG AGG CCA AAG GGA TTA GGA CTT GGA TTT					
I S E P I Q A M Q R P K G L G L G F					
1631	1640	1649	1658	1667	1676
CCT CTA CCA AAA AGT ACT TCC GCA ACT ACT ACC CCC AAT GCA GGA AAA TCC GCC					
P L P K S T S A T T T P N A G K S A					
1685	1694	1703	1712	1721	1730
TAA GAA AAG CAA AGA AGA AAT GTT TTA CAG ACT TTA TTC ACT ATG TCC CAT TGT					
*					
1739	1748	1757	1766	1775	1784
TCT AAA ATG ATA ACA TGA CTT CTG TTT TTG AAG CAA AAA TCT ACA TTG CCT CAA					
1793	1802	1811	1820	1829	1838
ACA CAT CAC TCT AGC TTC CTT ACT GCA TAC AGT CCT GCC ATA GTG AGA GAA ATG					
1847	1856	1865	1874	1883	1892
GGA TTT CAT CAC AAT TCA TGG TGC TAA AAT GAA AAC CTC TGC ACT TTA ATT TTT					
1901	1910	1919	1928	1937	1946
TTC AGT AAT TTC CAG CTA TTT CTA GGT ATA AAG AGC AGC TCG TTT CTC TTA TTT					
1955	1964	1973	1982	1991	2000
ATT TTA GTC TCA TGT GTC AAT ACT TTC CGA TGC TTT GCT TAA TTC ATG TAT GTG					
2009	2018	2027	2036	2045	2054
TGC AGT GCT GCA ATG CCC AGA CAA ACG TGA GCA CAC CCA CCA GTT TCT AAA ATG					
2063	2072	2081	2090	2099	2108
GAA TAG ACA GGA AAA GAT TGT GTT TTA TAT CAT CCC TAT CTA TTG TAA CCC AAA					
2117	2126	2135	2144	2153	2162
AGA CCT ACC ATC GCA TCA GTG AAG TCC GAA CAC ATC TTT GTT TGA AAG GCT TGT					

FIG. 3A

```
4 MDELVHDLIASALEQTSEQNKLG--ELWEEMALSPRQQRQLRKRRGRKRRS-DFTHLAEH
1 MEELVHDLVSALEESSEQARGGFAETGDHSRSISCPLKRQARKRRGRKRRSYNVHHPWET
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
61 TCCYSEASESSLDEATKDCREVAPVT--NFSDSDDTM-VAKRHPA--LNAIVKSKQHSWH
61 GHCLSEGSDSSLEEPSKDYRENHNNNNKDHSDSDQMLVAKRRPSSNLNNNVRGKRPLWH
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
116 ESDSFTENAPCRPLRRRRKVKRVTSEVAASLQQKLKVSWSYERGCRFKSAKKQRLSRWK
121 ESDFAVDNVGNRTLRRRRKVKRMAVDLPQDISNKRTMT--QPPEGCRDQDMSDRAYQYQ
  *** * * * * * * * * * * * * * * * * * * * * * * * * * * * *
176 ENTPTWTSSGH-----GLCESAENRTFLSKTGRKERMECETDEQKQGSDENMSECETSS
179 EFTKNKVKRKLKII RQGPKIQDEGVVLESEETNQTNKDKMECEEQKVSDELMSSESSESSS
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
229 VCSSSDTGLFTNDEGRQGDDEQSDWIFYEGECVPGFTVPNLLPKWAPDHCSEVERM--DSG
239 L-SSTDAGLFTNDEGRQGDDEQSDWIFYEKESGGACGITGVVPWWEKEDPTELDKNVDPDV
  ** * * * * * * * * * * * * * * * * * * * * * * * * * * * *
287 LDKFSDSTFLLPSRPAQRGYHTRLNRLPGAAARCLRK
298 FESILTGSFPLMSHPRRRGFQARLSRLHGMSSKNIKK
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

FIG. 3B

```
744 SNIGNKMLQAMGWREGSGLGRKCQGITAIEAQVRLKGAGLG
444 NNIGNRMLQNMGWTPGSGLGRDGKGISEPIQAMQRPKGLGLG
  **** * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

FIG. 4A

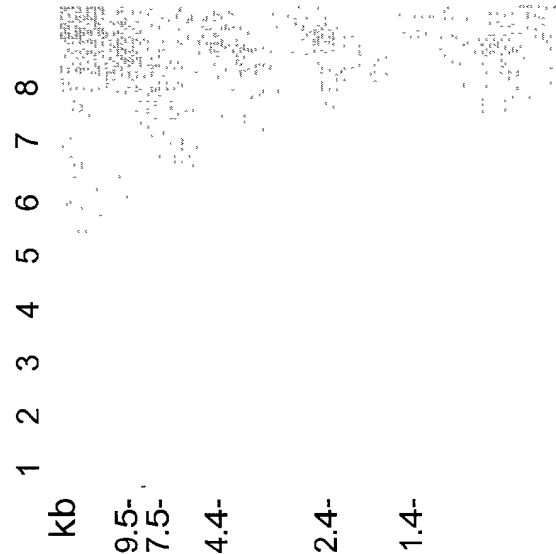
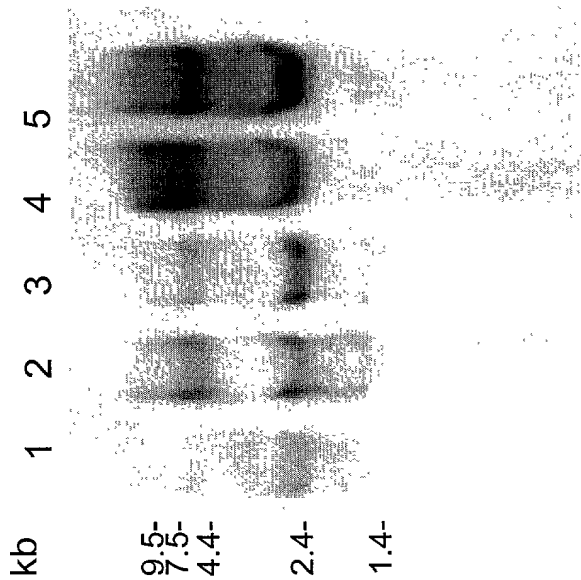


FIG. 4B



FIG. 4C



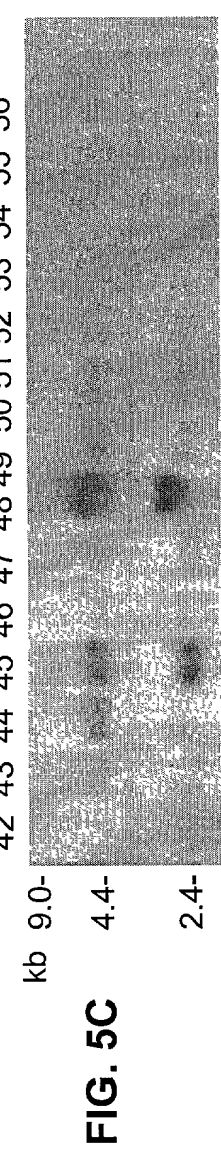
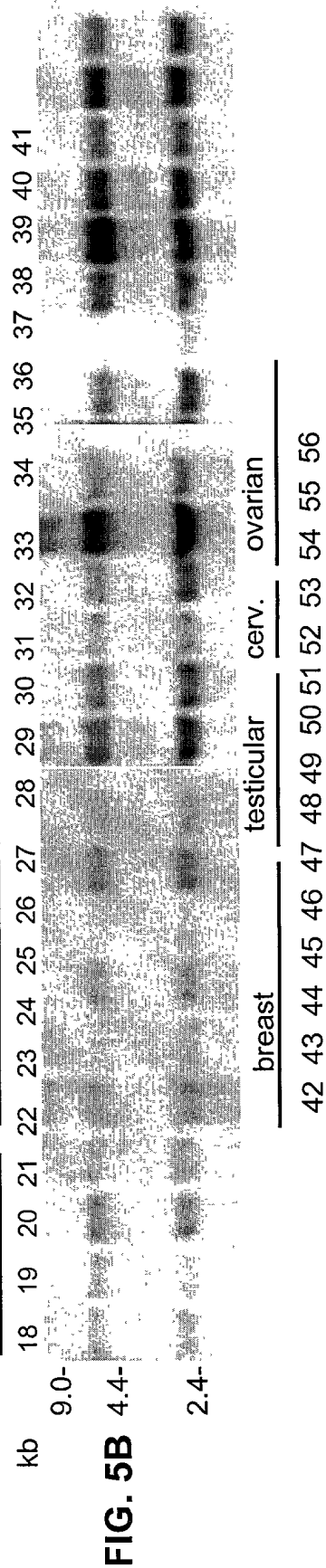
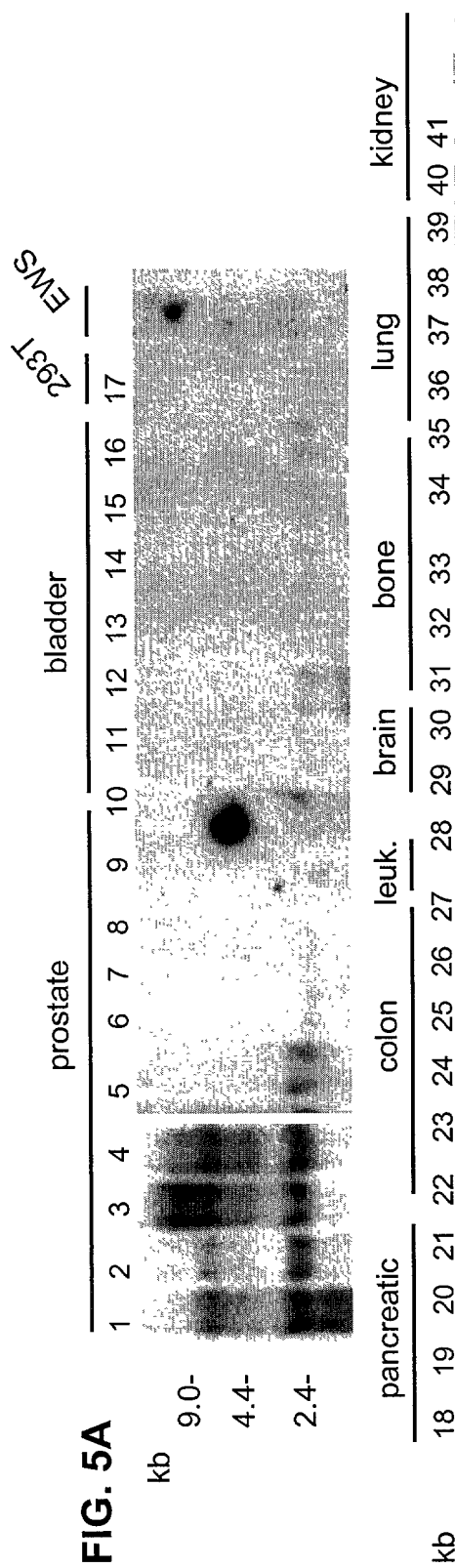


FIG. 6

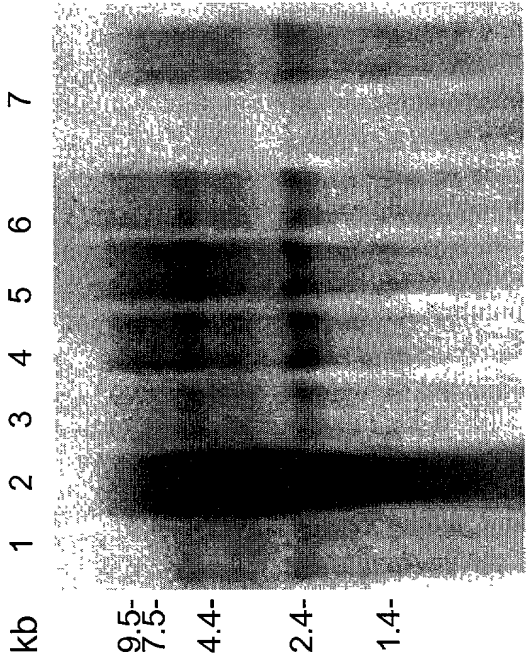


FIG. 7

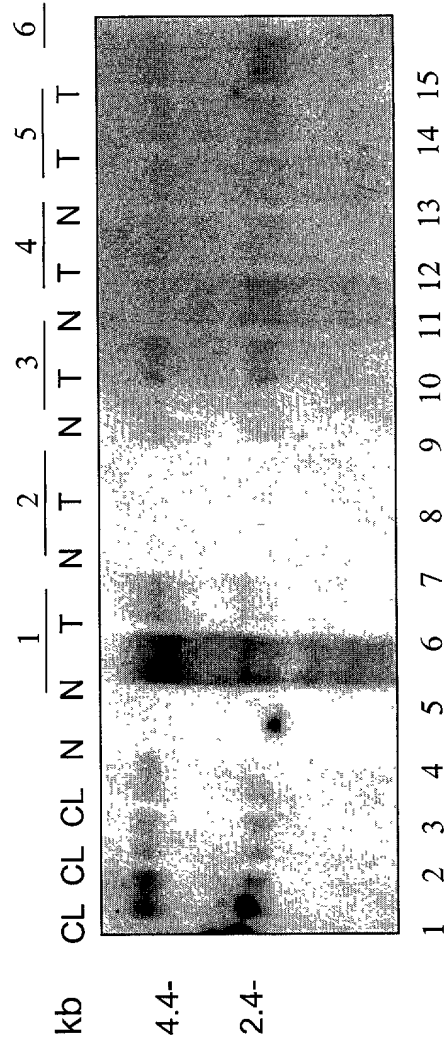


FIG. 8

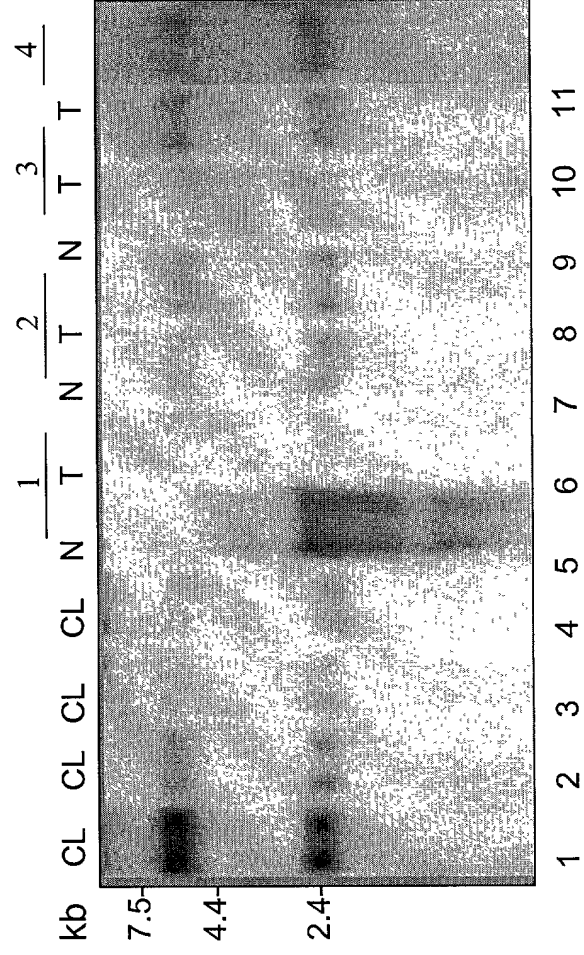


FIG. 9

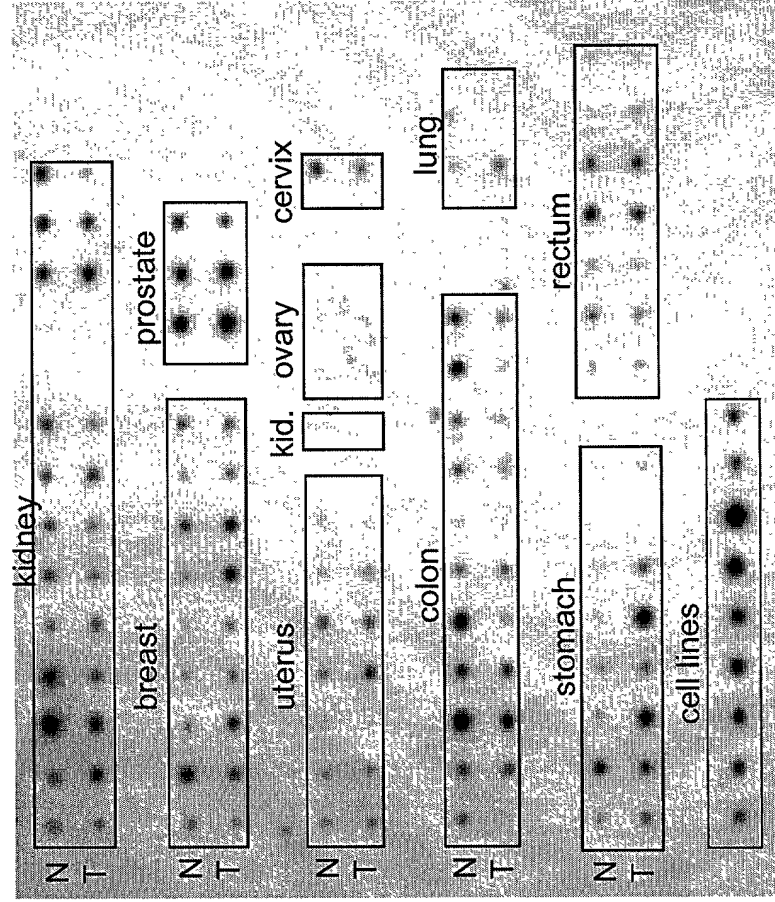


FIG. 10

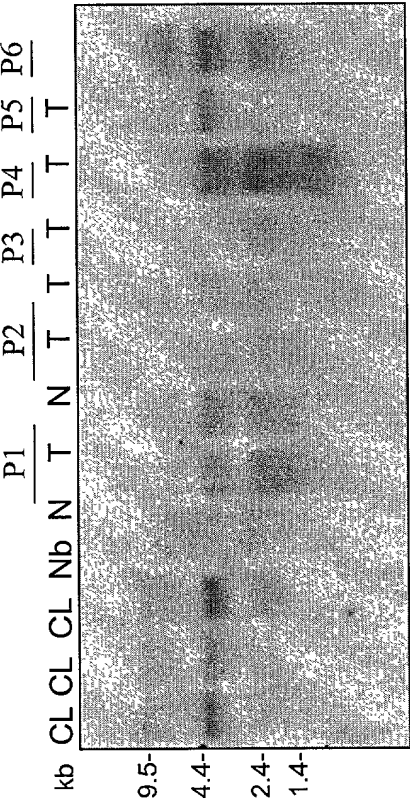


FIG. 11

